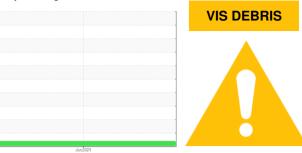


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

BUSCH VAC LINE 2

Vacuum Pump

BUSCH VM 100 (5 QTS)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

Moderate concentration of visible dirt/debris present in the oil.

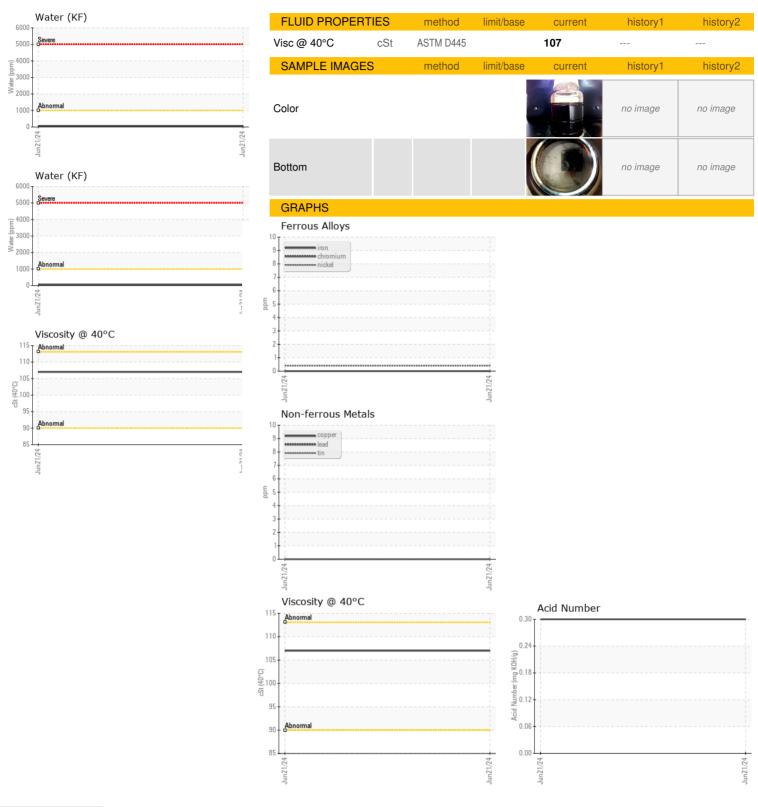
Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Client Info 21 Jun 2024					Jun2024		
Sample Number Client Info RP142226	OAMBLE INFORM	ATION					
Client Info	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Machine Age Wks Client Info 4	Sample Number		Client Info				
Dil Age	Sample Date						
Cali Changed Client Info N/A					•		
MEAR METALS	ŭ	wks			-		
WEAR METALS method limit/base current history1 history2 ron ppm ASTM D5185m >20 0 Chromium ppm ASTM D5185m >20 0 Nickel ppm ASTM D5185m >20 <1 Silver ppm ASTM D5185m 0 Aluminum ppm ASTM D5185m >20 <1 Aluminum ppm ASTM D5185m >20 0 Aluminum ppm ASTM D5185m >20 0 Copper ppm ASTM D5185m >20 0 Vanadium ppm ASTM D5185m >20 0 Zadmium ppm ASTM D5185m 0 Barrium ppm ASTM D5185m 0	-		Client Info		,		
Chromium	Sample Status				ABNORMAL		
Chromium	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>20	0		
Description	Chromium	ppm	ASTM D5185m	>20	0		
Aluminum	Nickel	ppm	ASTM D5185m	>20	<1		
Aluminum	Titanium	ppm	ASTM D5185m		0		
Lead	Silver	ppm	ASTM D5185m		0		
Description	Aluminum	ppm	ASTM D5185m	>20	<1		
ASTM D5185m Document Docum	Lead	ppm	ASTM D5185m	>20	0		
Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Barium ppm ASTM D5185m 0 Molybdenum ppm ASTM D5185m 0 Magnaese ppm ASTM D5185m <1	Copper	ppm	ASTM D5185m	>20	0		
Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 Molybdenum ppm ASTM D5185m 0 Magnesium ppm ASTM D5185m <1 Magnesium ppm ASTM D5185m <1 Magnesium ppm ASTM D5185m <1 Calcium ppm ASTM D5185m 0 Phosphorus ppm ASTM D5185m 0 Zinc ppm ASTM D5185m 0 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 <1 Solidium ppm ASTM D5185m >20	Tin	ppm	ASTM D5185m	>20	0		
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 Barium ppm ASTM D5185m 0 Barium ppm ASTM D5185m 0 Molybdenum ppm ASTM D5185m 0 Magnesium ppm ASTM D5185m <-1 Magnesium ppm ASTM D5185m -1 Magnesium ppm ASTM D5185m 2 Magnesium ppm ASTM D5185m 0 Calcium ppm ASTM D5185m 0 Phosphorus ppm ASTM D5185m 0 Zinc ppm ASTM D5185m 0 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m 3 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m 3 Potassium ppm ASTM D5185m 3 Potassium ppm ASTM D5185m 20 2 Water % ASTM D6304 >-1 0.006 PHUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOHg ASTM D8045 0.30 FLUID DEGRADATION method limit/base current history1 history2 White Metal scalar *Visual NONE LIGHT White Metal scalar *Visual NONE NONE Silit scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NONE NONE Appearance scalar *Visual NONE NONE Papearance scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Emulsified Water scalar *Visual NORML NORML	Vanadium	ppm	ASTM D5185m		0		
Boron ppm ASTM D5185m 0	Cadmium	ppm	ASTM D5185m		0		
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 0 Manganese ppm ASTM D5185m <1	Boron	ppm	ASTM D5185m		0		
Manganese ppm ASTM D5185m <1 Magnesium ppm ASTM D5185m 2 Phosphorus ppm ASTM D5185m 0 Zinc ppm ASTM D5185m 0 Zinc ppm ASTM D5185m 0 Zinc ppm ASTM D5185m 0 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m 3 Sodium ppm ASTM D5185m 3 Potassium ppm ASTM D5185m 3 Vater % ASTM D6304 >.1 0.006 Potassium ppm ASTM D6304 >.1 0.006 Potassium ppm ASTM D6304 >.1	Barium	ppm	ASTM D5185m		0		
Magnesium ppm ASTM D5185m <1 Calcium ppm ASTM D5185m 2 Phosphorus ppm ASTM D5185m 0 Zinc ppm ASTM D5185m 0 CONTAMINANTS method limit/base current history1 history2 Sölicon ppm ASTM D5185m >15 <1	Molybdenum	ppm	ASTM D5185m		0		
Calcium ppm ASTM D5185m 2 Phosphorus ppm ASTM D5185m 0 Zinc ppm ASTM D5185m 0 Zinc ppm ASTM D5185m 0 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m 3 Sodium ppm ASTM D5185m 3 Potassium ppm ASTM D5185m 3 Potassium ppm ASTM D5185m 3 Water % ASTM D5185m 3 Potassium ppm ASTM D5185m 3 Water % ASTM D5185m 3 Potassium ppm ASTM D5185m 3 3	Manganese	ppm	ASTM D5185m		<1		
Phosphorus	Magnesium	ppm	ASTM D5185m		<1		
Zinc ppm ASTM D5185m 0 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 <1 Sodium ppm ASTM D5185m 3 Potassium ppm ASTM D5185m >20 2 Water % ASTM D6304 >.1 0.006 Water % ASTM D6304 >.1000 66 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.30 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE Yellow Metal scalar *Visual NONE NONE -	Calcium	ppm	ASTM D5185m		2		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 <1 Sodium ppm ASTM D5185m 3 Potassium ppm ASTM D5185m >20 2 Water % ASTM D6304 >.1 0.006 ppm Water ppm ASTM D6304 >.1000 66 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.30 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE <th>Phosphorus</th> <th>ppm</th> <th>ASTM D5185m</th> <th></th> <th>0</th> <th></th> <th></th>	Phosphorus	ppm	ASTM D5185m		0		
Solition ppm ASTM D5185m >15 <1 Sodium ppm ASTM D5185m 3 Potassium ppm ASTM D5185m >20 2 Water % ASTM D6304 >.1 0.006 ppm Water ppm ASTM D6304 >1000 66 ppm Water ppm ASTM D6304 >1000 66 PLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOHg ASTM D8045 0.30 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE LIGHT Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Codor scalar *Visual NORML NORML Emulsified Water scalar *Visual NORML NORML Emulsified Water scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual NORML NORML ASTM D5185m 3	Zinc	ppm	ASTM D5185m		0		
Sodium	CONTAMINANTS		method	limit/base	current	history1	history2
Sodium	Silicon	ppm	ASTM D5185m	>15	<1		
Water % ASTM D6304 >.1 0.006 opm Water ppm ASTM D6304 >1000 66 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.30 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE LIGHT Yellow Metal scalar *Visual NONE NONE Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE MODER Debris scalar *Visual NONE NONE Sand	Sodium		ASTM D5185m		3		
Water % ASTM D6304 >.1 0.006 Opm Water ppm ASTM D6304 >.1000 66 FLUID DEGRADATION method limit/base current limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.30 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE LIGHT Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Debris scalar *Visual NONE MODER Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Appearance scalar *Visual NORML NORML Emulsified Water <td>Potassium</td> <td></td> <td>ASTM D5185m</td> <td>>20</td> <th>2</th> <td></td> <td></td>	Potassium		ASTM D5185m	>20	2		
FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.30 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE LIGHT Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NORML NORML Appearance scalar *Visual NORML NORML Codor scalar *Visual NORML NORML Emulsified Water scalar	Water		ASTM D6304	>.1	0.006		
VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE LIGHT Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE MODER Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >.1 NEG	ppm Water	ppm	ASTM D6304	>1000	66		
VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE LIGHT Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE MODER Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Dodor scalar *Visual >.1 NEG Emulsified Water scalar *Visual >.1 NEG	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
White Metal scalar *Visual NONE LIGHT Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE MODER Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Dodor scalar *Visual NORML NORML Emulsified Water scalar *Visual >.1 NEG	Acid Number (AN)	mg KOH/g	ASTM D8045		0.30		
Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE MODER Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Dodor scalar *Visual NORML NORML Emulsified Water scalar *Visual >.1 NEG	VISUAL		method	limit/base	current	history1	history2
Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE MODER Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Dodor scalar *Visual NORML NORML Emulsified Water scalar *Visual >.1 NEG	White Metal	scalar	*Visual	NONE	LIGHT		
Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE MODER Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >.1 NEG	Yellow Metal	scalar	*Visual		NONE		
Silt scalar *Visual NONE NONE Debris scalar *Visual NONE MODER Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Ddor scalar *Visual NORML NORML Emulsified Water scalar *Visual >.1 NEG	Precipitate	scalar	*Visual				
Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >.1 NEG	Silt	scalar	*Visual	NONE	NONE		
Appearance scalar *Visual NORML NORML COMMON Scalar *Visual NORML NORML COMMON NORML COMMON NORML COMMON NORML COMMON NORML COMMON NORML	Debris	scalar	*Visual	NONE	▲ MODER		
Odor scalar *Visual NORML Emulsified Water scalar *Visual >.1 NEG	Sand/Dirt	scalar	*Visual	NONE	NONE		
Emulsified Water scalar *Visual >.1 NEG	Appearance	scalar	*Visual	NORML	NORML		
· · · · · · · · · · · · · · · · · · ·	Odor	scalar	*Visual	NORML	NORML		
Free Water scalar *Visual NEG : MARC BODEAU - CLAMIDRI	Emulsified Water	scalar	*Visual	>.1	NEG		
	Free Water	scalar	*Visual	7	NEG	: MARC BODEA	U - <u>CL</u> AMIDRF



OIL ANALYSIS REPORT





Certificate 12367

Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : RP142226 Lab Number : 06219795

Unique Number : 11097992 Test Package : IND 2

Received : 25 Jun 2024 **Tested** : 26 Jun 2024 Diagnosed

: 27 Jun 2024 - Don Baldridge

50 PATRIOT DRIVE MIDDLETOWN, DE US 19709 Contact: MARC BODEAU marc.f.bodeau@clarios.com

To discuss this sample report, contact Customer Service at 1-800-237-1369. * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Report Id: CLAMIDRP [WUSCAR] 06219795 (Generated: 06/27/2024 13:37:53) Rev: 1

Contact/Location: MARC BODEAU - CLAMIDRP

T:

F:

CLARIOS